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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,290	01/13/2004	Ilonka Harezi	P00783-US-01 (20476.0001)	4481
22446	7590	08/05/2009	EXAMINER	
ICE MILLER LLP ONE AMERICAN SQUARE, SUITE 3100 INDIANAPOLIS, IN 46282-0200			ROANE, AARON F	
			ART UNIT	PAPER NUMBER
			3769	
			MAIL DATE	DELIVERY MODE
			08/05/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/757,290	<b>Applicant(s)</b> HAREZI ET AL.	
	<b>Examiner</b> Aaron Roane	<b>Art Unit</b> 3769	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-18, 20 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-18, 20 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/27/2009 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-10, 13, 15, 17, 18, 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (U.S. Patent 5,896,004) in view of Young (U.S. Patent 4,337,414) (both cited previously).

Regarding claims 20 and 24, Feldman et al. disclose a bulb comprising a shell (D) enclosing a hollow interior; a tube (Lamp A) having a first open end (22) and a second

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open end (24) and a continuous pathway communicating between said first open end and said second open end, said tube intersecting with said shell such that said first open end and said second open end reside outside said shell and a portion of said tube between said first open end and said second open end resides within said shell, each said intersection of said tube and said shell being accomplished such that any contents of said hollow interior of said shell are sealed within said shell and any contents of said hollow interior of said shell are segregated from any contents of said portion of said tube residing within said shell; and at least one electrode (a first of 36) having at least one end terminating inside said shell, see col. 3:27 through col. 5:12 and figures 1-2. It should be further noted that the portion of the tubing residing within the shell encloses flowing current. **Feldman et al. further disclose an electrode enclosure comprising a hollow tube (tubular “fastening arrangement” 70, see col. 4:38-57 and figures 2-4) having a first tube end and a second tube end and a continuous pathway communicating between said first tube end and said second tube end, wherein said first tube end communicates with said hollow interior of said shell and said second tube end is configured to form a gas-impermeable seal around at least one electrode.** Feldman et al. fail to disclose a source of electromagnetic waves in the form of a coil. Young discloses a lamp device and teaches providing the lamp with a bucking coil (58) in order to generate “a voltage across the lamp Lb which is greater than the input or supply voltage and thus reliably starts the lamp despite its long arc length. This type of ballast arrangement is very compact in size, light in weight and has excellent operating efficiency and is thus well suited for use in the compact fluorescent lamp units of the present invention where such

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characteristics are of prime importance,” see col. 8:50 - col. 10:14 particularly col. 9:13-31 and figures 5 and 6. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al., as taught by Young, to provide the lamp with a bucking coil in order to generate “a voltage across the lamp Lb which is greater than the input or supply voltage and thus reliably starts the lamp despite its long arc length. This type of ballast arrangement is very compact in size, light in weight and has excellent operating efficiency and is thus well suited for use in the compact fluorescent lamp units of the present invention where such characteristics are of prime importance.”

Regarding claims 6-10, Feldman et al. disclose the claimed invention, see col. 3:27-57.

Regarding claim 13, Feldman et al. disclose the portion of said tube residing within said shell encloses a flowing substance, see col. 3:27 - col. 5:12 and figures 1-2.

Regarding claims 15, 17 and 18, Feldman et al. disclose the claimed invention, see col. 3:27 - col. 5:12 and figures 1-2.

Claims 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al.

(U.S. Patent 5,896,004) in view of Young (U.S. Patent 4,337,414) as applied to claim 20 above, and further in view of Oga et al. (U.S. Patent 5,824,130) (cited previously).

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Regarding claims 2, 4 and 5, Feldman et al. in view of Young disclose the claimed invention except for the portion of said tube residing within said shell is configured as a spiral comprising a plurality of concentric turns, the spiral comprises three or more concentric turns and/or the spiral comprises a prime number of concentric turns. Oga et al. disclose a bulb comprising a shell (100) enclosing a hollow interior and an inner tube (1) inside the hollow interior and teach providing the tube with a spiral shape having three turns in order to enhance filling and light generation, see col. 1, lines 46-53, col.5-7 and figures 1-7. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al. in view of Young, as taught by Oga et al., to provide the tube with a spiral shape having three turns in order to enhance filling and light generation.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (U.S.

Patent 5,896,004) in view of Young (U.S. Patent 4,337,414) in further view of Oga et al.

(U.S. Patent 5,824,130) as applied to claim 2 above, and still further in view of Soules et al.

(U.S. Patent 5,680,005) (cited previously).

Regarding claim 3, Feldman et al. in view of Young in further view of Oga et al. disclose the claimed invention except for each successive concentric turn of the plurality of concentric turns decreases in diameter. Soules et al. disclose a bulb (A) having a tube (B) bulb with a gas filled and teach providing the with a helix/spiral configuration with decreasing diameter “in order to maximize the length of discharge tubing for a given

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height,” see abstract and figures 1 and 2. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al. in view of Young in further view of Oga et al., as taught by Soules, to provide the bulb with tube having a helix/spiral configuration with decreasing diameter “in order to maximize the length of discharge tubing for a given height.”

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (U.S. Patent 5,896,004) in view of Young (U.S. Patent 4,337,414) as applied to claim 7 above, and further in view of Okubo (U.S. Patent 5,617,659) (cited previously).

Regarding claims 11 and 12, Feldman et al. in view of Young disclose the claimed invention except for the noble gas comprises neon and/or helium. Okubo discloses a discharge bulb 18 and teaches the alternate/equivalence of neon, helium and argon as a discharge gas, see col. 6:54-60. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al. in view of Young, as taught by Okubo, to use neon and/or helium inside the discharge tube as an alternative to argon.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (U.S. Patent 5,896,004) in view of Young (U.S. Patent 4,337,414) as applied to claim 13 above, and further in view of Lapatovich et al. (U.S. Patent 6,696,788) (cited previously).

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Regarding claim 14, Feldman et al. in view of Young disclose the claimed invention except for the hollow interior of said shell outside said tube contains a gaseous matter, and wherein said flowing substance does not intermingle with said gaseous matter.

Lapatovich et al. disclose a double jacket bulb (10) having an exterior shell (16) and an interior discharge tube/jacket (12) and electrodes 30 and 32 and teach providing a gas (22) in the outer shell (16) such that when activated by heat and radiation from inner tube, when the lamp is operating, converts radiation, from one wavelength to another, see col. 2:60 - col. 3:49 and figures 1-7. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Feldman et al. in view of Young, as taught by Lapatovich et al., to provide a gas in the outer shell such that when activated by heat and radiation from inner tube, when the lamp is operating, converts radiation, from one wavelength to another.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (U.S. Patent 5,896,004) in view of Young (U.S. Patent 4,337,414) as applied to claim 15 above.

Regarding claim 16, Feldman et al. in view of Young disclose the claimed invention except for the ozone. Applicant discloses various gaseous substances within the tube, see claims 8-12. Additionally, Applicant discloses on page 15, lines 3-5 “the material flowing through vortex tube 23 comprises ozone, but the material does not necessarily have to be ozone or a gas.” Therefore, by Applicant’s own admission, ozone is not seen as distinct over any of the other claimed gases.



***Response to Arguments***

Applicant's arguments filed 7/27/2009 have been fully considered but they are not persuasive.

Applicant makes one basic argument/remark and repeats it six times (arguments III:A-III F on pages 9-15). Applicant asserts (on page 10, 2nd full paragraph):

*Applicants respectfully submit that the rejections of Claims 6-10, 13, 15, 17, 18, 20, and 24 under 35 U.S.C. § 103(a) should be withdrawn because the combination of Feldman and Young fail to disclose all of the limitations of the claims against which they are asserted. Neither Feldman nor Young disclose, teach, or suggest having an electrode enclosure as described in Claims 20 and 24. Therefore, the combination of Feldman and Young fails to disclose the limitations of Claim 20. In addition, the combination of Feldman and Young fails to disclose the limitations of Claim 24.*

The examiner strongly disagrees, as pointed out in the above rejections to claims 20 and 24, **Feldman et al. further disclose an electrode enclosure comprising a hollow tube (tubular “fastening arrangement” 70, see col. 4:38-57 and figures 2-4) having a first tube end and a second tube end and a continuous pathway communicating between said first tube end and said second tube end, wherein said first tube end communicates with said hollow interior of said shell and said second tube end is configured to form a gas-impermeable seal around at least one electrode.**

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Regarding Applicant's remaining arguments/remarks (arguments III:A-IIIF on pages 10-15), the examiner directs Applicant to the rebuttal immediately above.

The Applicant is invited to request an interview to discuss suggestions to find an acceptable conclusion of the prosecution for all parties.

**Due to the RCE, this action is made non final.**

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Roane whose telephone number is (571) 272-4771. The examiner can normally be reached on Monday-Thursday 8:30AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Johnson can be reached on (571) 272-4768. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron Roane/  
Examiner, Art Unit 3769

/Carl H. Layno/  
Supervisory Patent Examiner, Art Unit  
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